Background: Patients with long standing DM undergoing surgical interventions are put under great challenge as they may have cardiovascular and/or cardiac autonomic neuropathy (CAN). CAN is serious, often overlooked and under diagnosed, with possible arrhythmias and silent ischemia that threaten life. Objectives: Assessment of CAN in long standing type 2 diabetic women undergoing major surgery. Study design: Cross sectional study. Patients and methods: One hundred and six type 2 diabetic women scheduled for major surgery were assessed by the autonomic function tests. Only one hundred cases completed the study. CAN was assessed by analyzing HR variations during three standard tests (deep breathing, lying to standing and valsalva maneuver). Sympathetic functions were assessed by checking orthostatic hypotension. The CAN score of each patient was analyzed. Continuous 24 hour ECG monitoring (Holter) was done to evaluate ischemia, arrhythmia, QTc and QTd. Transthoracic Doppler echocardiography, stressing on LVH, diastolic and systolic dysfunctions were carried out. Cases were classified as mild (with only one abnormal test) or severe CAN when two or more abnormal function tests were present. Exclusion criteria include any systemic illness that can affect the study results or the autonomic functions, smoking and HTN. Results: CAN was detected in 70% of the studied cases, and 70% were severe CAN. Postural hypotension was detected in 34% of the studied cases. QTc prolongation and QT dispersion were frequent. ECG and Doppler echocardiography changes of LVH were more prevalent among patients with CAN. Diabetics with CAN were significantly older had longer duration of DM and higher HbA1-c, higher pulse pressure, triglyceride, uric acid and urinary albumin excretion rate. They also had significant increased LVM index, diastolic dysfunction and myocardial ischemia. Conclusion: Middle aged women with long standing diabetes are vulnerable to CAN with postural hypotension and prolonged QTc intervals, QT dispersion, and increased LVMI and myocardial ischemia. Identification of CAN is crucial to exercise prevention against hazards of CV insults during stressful situation as surgery.